# COORDINATING COMMITTEE PRESENTATION March 6, 2006

# **OPERATIONAL STATUS 2005-06, Third Quarter**

#### PRODUCTION INFORMATION

(Fiscal Year To Date, thru January 2006) IGF's availability is down sharply due to unplanned Maintenance and Forced Outages. We have had 11 shutdowns fiscal year to date resulting in a forced outage rate of 2.83 % and an equivalent availability of 95.6%. This cascades negatively impacting net generation which is 8,696.9 GWhrs and coal usage at 3,589.9 ktons. Coal quality has improved sharply to 11,535 Btu/lb and net station heat rate has improved slightly. Net output factor is 97.5% which is up slightly. However, the net capacity factor is 93.6%, down from last years value of 96.6%.

Side note, January 2006 had an all-time high monthly generation of 1,393,830 MWhrs. The previous monthly high gross generation was in October 2004 with 1,389,415 Mwhrs. Generation if a function of availability (only one small derate STS- Adelanto transformer oil leak, equil avail= 99.75%), output factor (ECC load dispatch levels, NOF= 98.44%), and time (January has 31 days, the very best production month is October which has 31 days, plus 1 extra hour due to day light savings time).

PROD INFO (IGF)	FYTD	01-02	02-03	03-04	04-05	05-06
Net Generation	GWhr	8,281.3	8,463.6	8,758.4	8,972.1	8,696.9
Coal Usage	ktons	3,314.5	3,408.6	3,563.8	3,799.0	3,589.9
Coal Quality	btu/#	11,910	11,765	11,669	11,252	11,535
Net Station Heat Rate	B/KWh	9,538	9,480	9,499	9,532	9,526
Forced Outage Rate	%	0.50	0.13	0.70	0.38	2.83
Equiv Avail Factor	%	98.8	99.8	98.8	99.3	95.6
Net Output Factor	%	97.7	97.5	97.4	97.0	97.5
Net Capacity Factor	%	96.7	97.3	96.7	96.6	93.6

NOTES: Fiscal Year To Date (FYTD) is 7/1 through 1/31

Comparison is with previous years numbers through the same period.

### **EVENTS REPORT SUMMARY**

(Unplanned Forced and Maintenance Outages, listed in reverse order, since 7/1/2005)

12/02/05	U1 Maint Outage	Main Steam Safety Valve RV-6 repair (unit had been derated)		
11/12/05	U1 Forced Outage	BFPT 1A trip, governor test/ thrust bearing instrumentation		
11/04/05	U2 Maint Outage	Boiler Tube Leak- Waterwall- lower slope		
(3 new since last report)				
10/19/05	U1 Forced Outage	Controls trip- total air flow transmitter (loss of signal)		
10/16/05	U2 Forced Outage	SBFP trip- adjusting max output (following BFP B o/s to repair oil leak)		
10/14/05	U2 Maint Outage	Boiler Tube Leak- Waterwall- corner weld, 2 ½ floor NW		
09/15/05	U1 Forced Outage	Main Transformer alarm- A phase bushing replacement		
08/04/05	U2 Forced Outage	Boiler Tube Leak- Intermed SSH (repeat)- obstruction in header		
08/01/05	U2 Forced Outage	Boiler Tube Leak- Intermed SSH, bundle 41-inner tube		
07/31/05	U2 Maint Outage	Main Steam Safety Valve RV-6 repair (was gegged)		
07/22/05	U2 Forced Outage	DC transmission- loss of both poles due to line fault, U2 selected to trip		

#### EVENTS REPORT- DETAILED REPORTS

(Unplanned Forced and Maintenance Outages, since last CCM Report, listed in reverse order)

12/02/05 U1 Maint Outage Main Steam Safety Valve RV-6 repair (unit had been derated) (Note: similar event but on other unit Maint Outage 07/31/05 U2 Mn Stm Safety Valve RV-6 repair)

# Safety Relief Valve U1 RV-6- repair

The Unit 1 Safety Relief Valve 1SGG-RV-006 was gagged on October 20, 2005 following a hard (all safeties lifted) unit trip resulting from an instrumentation total air flow transmitter problem. Following Unit 1 startup, relief valve RV-6 was gagged due to simmering (small steam leak) and the unit derated due to loss of boiler main steam flow relieving capacity. Unit 1 was derated until December 2, 2005 where the unit was scheduled for a Maintenance Outage to fix the safety valve.

The safety valve failure root cause was debris lodged between the seat surfaces when the valve re-closed following the unit trip. The lodged debris caused damage to the seat such that the valve would not close tight. This allowed steam to escape and the steam leakage cut the valve seat. Repair on the Safety Valve: Machine seat down .005" (depth .445" to .440", lower limit is .250"), Setting of lower seat pin, down 5 notches from top of seat. Spindle run out was .007", new .750 valve disk was installed, disc drop was .020". Valve set pressure was increased two flats to compensate for disk machining

11/12/05 U1 Forced Outage BFPT 1A trip, governor test/ thrust bearing instrumentation U1 BFPT 1A tripped three minutes after successful test and reset of governor following emergency governor trip. A faulty BFPT thrust pressure switch caused the U1 outage. The pressure switch has 2 contacts on top. One for alarm and one for trip. The trip side goes to a group trip and the alarm side goes to sequence of events alarm. The design was for them to both be set at 40 psi, so that when a group trip happens, there is a corresponding SOE alarm to let them know the cause. In this case the trip was operating at 39 psi and the alarm at 40 psi. So the pump was tripping with no alarm and it was difficult to diagnose. I&C has now set the alarm at 43 and the trip at 43.5, so now there will always be an alarm to help diagnose a trip. At this point, we still don't know why it was tripping at 39 psi, but they tried operating it many times at 43 psi and it works fine.

# 11/04/05 U2 Maint Outage Boiler Tube Leak- Waterwall- lower west slope

Unit 2 was taken off-line at 23:56 on November 4 for a tube failure in the left sidewall and front waterwall at elevation 4703.2', tube 111 on left waterwall, and tube 339 on the front waterwall. The Unit was back on line at 22:27 on November 6 for a total outage time frame of 46.60 hours. During the course of the repair, four more potential tube failures were located and repaired (tube 235 on left waterwall, tube 139, 147, and 205 on the right waterwall . These tubes were also weld repaired. Further investigation and possible repairs will be done at the next scheduled outage.

# Repair & Failure Summary

The failure was noted on October 30, 2005 by IPSC Operations. Repair work was scheduled for the following weekend, November 5-6, 2005. The tube failure occurred at elevation 4703.2', tube 111, at the bottom portion of the sloped floor, just above the lower nose of the front waterwall. The leak was at the toe of the sloped floor-to-sidewall seal weld in SA210A1 material. The cracks were ground out and